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| EXAMINER | |
|---|---|
| WALSH, DANIEL I | |
| ART UNIT | PAPER NUMBER |
| 2876 | |

DATE MAILED: 10/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/708,902 | CHAPPIDI ET AL. | |
| | Examiner | Art Unit | |
| | Daniel I. Walsh | 2876 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *14 July 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,7-13,15,16 and 18* is/are rejected.

7)☒ Claim(s) *6,14,17 and 19* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

1. Receipt is acknowledged of the Amendment received on 14 July 2005.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 16, 2, 3, 4, 7-13, 15, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carrender et al. (US 2004/0212480) in view of Lareau et al. (US 2003/0137968).

Re claim 1, Carrender et al. teaches a set of badges attached to a first set of assets and transmitting a corresponding badge identifier; a second plurality of badges, wherein each of the second plurality of badges is attached to a corresponding one of a second set of assets and transmits a corresponding badge identifier, wherein the first set of assets and the second set of assets are comprised in the plurality of assets; each of the second plurality of badges receiving a corresponding one of a plurality of sets of badge identifiers, each of the second plurality of badges sending the corresponding one of a plurality of sets of badge identifiers associated with a badge identifier of the second badge, wherein the badge identifiers in each set are sent together associated with the badge identifier of the second badge even if the badge identifiers in the set are received at different time instances; and a processing system receiving and processing the

plurality of sets of badge identifiers and corresponding identifiers of the intelligent badges to determine a relative location of each of the plurality of assets of interest (FIG. 4, and abstract, for example). Carrender et al. teaches that upper and lower level tags are attached to assets, and these are interpreted as asset and intelligent badges, as the applicant has not provided structural/functional support for the terms asset and intelligent badges in order to distinguish them from the prior art badges. Carrender et al. teaches that each tag can receive information about the others tags so that all tag information is relayed to a controller (abstract). This is interpreted as an intelligent badge identifier sending its own identifier along with the other tags (asset) identifier. In a nested approach, it is understood that not all the tag identifiers are received at the same time (some are farther away, nested/chained, and therefore would take longer than those directly in the range of the tag). Though Carrender et al. teaches a reader 40, Carrender et al. is silent to a processing system. It would have been obvious to have a processing system with the reader in order to process and keep track of inventory and asset location as is known in the art.

Though silent to determining a location of the assets of interest, the Examiner notes that it would have been obvious to one of ordinary skill in the art to determine the location in order to provide up to date inventory information about the assets.

Lareau et al. teaches that the location of the assets is determined (paragraph [0004], and as discussed in the previous Office Action). Lareau et al. also teaches a plurality of tags together to track assets.

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to combine the teachings of Carrender et al. with those of Lareau et al.

One would have been motivated to do this in order to provide location information, in addition to the mere detection of an item, in order to provide more detailed inventory information.

Re claim 16, the Examiner notes that each tag is inherently associated with a physical zone (communication radius, for example). It has been discussed above that a tag can receive tag identifiers from the assets around it/in an area. As the badge identifiers are relayed to the reader/processing system, the physical location of each of the badges is determined as being in one of the zones by the reader/processing system, because of the identifiers associated with the tag. Additionally, as the claims do not recite that the intelligent zones are non-overlapping/unique, the Examiner notes the intelligent zone can be interpreted as the whole area where the assets are located, and accordingly, when located, the asset/tag/badge is inherently located in one intelligent physical zone.

Re claim 2, as the reader 40 receives badge identifiers, it would have been obvious to one of ordinary skill in the art to connect the reader to a processing system to process information for inventory/tracking purposes, as is known in the art. Readers inherently have a reader zone (communicating distance), and as the reader zone is able to detect tags on assets, it is therefore understood that the reader zone contains intelligent physical zones (from the intelligent tags within the reader zone).

Re claim 3, the Examiner notes that there are common badges in the nested tag approach, for example. It has been discussed above that tag locations are determined. Therefore, the Examiner notes that different badges, when polled, can include identifiers of tags that are

common. Accordingly, as the location of the assets is determined, the common badge/tag assets are determined, in the same manner as other tags/badges.

Re claim 4, dummy ID 135 of Lareau et al. is interpreted as a reference badge positioned at a known location and transmits its badge identifier as part of a stream of identifiers used to locate the assets relative to a known location. As Lareau et al. teaches that the tags can communicate up and downstream, the Examiner notes that the location of each asset relative to the known location can be determined, and the location of the zone of the intelligent badge can be determined by the assets in direct communication with the intelligent badge.

Re claim 7, it has been discussed above that there are intelligent and asset badges/tags. Accordingly, it is obvious that the badge identifiers included are either one of the intelligent or asset badge type, in order to provide asset information.

Re claim 8, it has been discussed above that the intelligent badges are attached to assets of interest. Via the nested approach, the location of an asset is located with more precision.

Re claim 9, the limitations have been discussed above, re claim 1. The Examiner notes that each badge and each reader inherently has a zone through which it can communicate, either directly or through a nested approach. Therefore, the intelligent physical zone can be interpreted to include the whole area where tags are located. Therefore, when the location of an asset is determined, it is therefore inherently in an intelligent physical zone, or else it would not be detected, as the claims do not recite that the corresponding intelligent zones are unique/non-overlapping.

Re claim 10, the Examiner notes that there are common badges in the nested tag approach. As tags relay messages from tags out of range, the physical location of an item, including a common badge is determined.

Re claim 11, the limitations have been discussed above re claim 9.

Re claim 12, the limitations have been discussed above re claim 3

Re claim 13, the limitations have been discussed above re claim 4.

Re claim 15, it would have been obvious to one of ordinary skill in the art to connect the reader to a processing system for location and inventory information of the assets, as is conventional in the art.

Re claim 18, the limitations have been discussed above re claim 16.

3. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Carrender et al./Lareau et al., as discussed above, in view of Heller (US 6,154,139)

The teachings of Carrender et al./Lareau et al. have been discussed above.

Carrender et al./Lareau et al. is silent to the badges sending identifiers in both an IR and RF signal, wherein the R.F signal is received by the reader and the intelligent badges receive the IR signal, as Lareau et al. teaches the transmission being done by R.F means.

Heller teaches tags that are capable of sending identifying signals in both RF and IR format (abstract).

At the time the invention was made, it would have been obvious to an artisan to combine the teachings of Lareau et al. wit those of Heller.

One would have been motivated to do this in order to be able to communicate signals in a line of sight manner in order (RF) to reduce the costs, while when required (such as not line of

sight, or remote) still transmitting via RF, in order to ensure data transmission/reception.

### *Response to Arguments*

4. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection. The Examiner again notes that giving tags/badges different names (active/intelligent/asset), without providing for a structural or functional difference between the types of badges/tags, does not differentiate them from the prior art structure that is capable of performing the same tasks/limitations.

### *Allowable Subject Matter*

5. Claims 6, 14, 17, and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record fails to teach a set of component badges on a fourth set of assets, a set of active badges on a third set of assets, wherein the processing system determines the location of the component badges with reduced computational complexity (in comparison to the asset badges), that each of the asset badges transmits a badge identifier using a first type of signal suited for a first (shorter distance) range, and the intelligent badges send the corresponding one of a plurality of sets of badge identifiers associated with the intelligent badge identifier with a second type of signal (longer distance range).

***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Wooley (US 5,959,568), Reis et al. (US 5,686,902), Boyd et al. (US 6,380,894), and Doles et al. (US 2001/0030625).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel I. Walsh whose telephone number is (571) 272-2409. The examiner can normally be reached on M-F 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on (571) 272-2398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Daniel I Walsh
Examiner
Art Unit 2876

KARL D. FRECH
PRIMARY EXAMINER